

# **PROTECTED SPECIES ASSESSMENT**

**CALUSA GREEN  
Charlotte County, Florida**

**March 2012**

**Prepared by:**



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## INTRODUCTION

The following assessment has been prepared to identify on-site vegetative communities and address wildlife species listed by the Florida Fish and Wildlife Conservation Commission (FWC) and/or U.S. Fish and Wildlife Service (FWS) as endangered, threatened, or species of special concern which may be utilizing the Calusa Green property.

The subject parcel is located in Section 18, Township 40S, Range 27E within Charlotte County, Florida. More specifically, the subject property is located north of Bermont Road, just northeast of the intersection of Neal Road and Chiquita Drive. Please refer to the attached LOCATION MAP.

## SITE CONDITIONS

The site inspection(s) was conducted by qualified staff ecologists in March 2012. During the inspection(s), temperatures ranged from 65° - 80° F, winds from 5 - 15 mph, and skies from clear to partly cloudy.

## VEGETATIVE COMMUNITIES

Field observations, in conjunction with the Charlotte County Soil Survey and aerial photographs, were used to develop a map of the vegetative communities onsite. The following table displays the four (4) vegetative associations found on the subject parcel. The vegetative communities were identified and classified utilizing the Florida Land Use Cover and Forms Classification System (FLUCCS). A description of the communities is also included. The limits of any on-site wetlands and/or surface waters are preliminary and subject to review/approval by applicable regulatory agencies. Please refer to the attached FLUCCS MAP.

FLUCCS ID	FLUCCS DESCRIPTION	ACREAGE
261	Fallow Crop Land	514.34
510D	Ditch	25.61
617	Mixed Wetland Hardwoods	3.36
618	Willow	10.59
<b>TOTAL</b>		<b>553.90</b>

### FLUCCS 261 – Fallow Crop Land

This upland association is characteristic of abandoned citrus grove in which the citrus trees have previously been removed. These uplands also consist of minor, shallow irrigation swales associated with the previous citrus production activities as well as dirt roads and pumping stations. The on-site Fallow Crop Land (FLUCCS 261) community is predominately comprised of the following vegetative species: bahia grass (*Paspalum notatum*), dogfennel (*Eupatorium capillifolium*), ragweed (*Ambrosia artemisiifolia*), beggar-tick (*Bidens alba*), cogongrass (*Imperata cylindrica*), wax myrtle (*Myrica cerifera*), saltbush (*Baccharis halimifolia*), and remnant citrus (*Citrus sp.*) trees. Various other upland grass, sedge, and weed species are also present.

### FLUCCS 510D – Ditch

Several substantial agricultural ditches span the outer boundaries of the on-site Fallow Crop Land (FLUCCS 261), as well as the interior of these areas. These agricultural ditches range from approximately 10 to 30 feet in width as measured from top-of-bank to top-of-bank. Additionally, one (1) larger agricultural ditch spanning north to south through the center

of the subject property is approximately 50 feet wide. The on-site ditches are primarily comprised of open water and the following vegetative species: cattail (*Typha sp.*), primrose willow (*Ludwigia peruviana*), duckweeds (*Lemna spp.*), torpedo grass (*Panicum repens*), creeping seedbox (*Ludwigia repens*), alligatorweed (*Alternanthera philoxeroides*), spatterdock (*Nuphar advena*), duck potato (*Sagittaria lancifolia*), pickerelweed (*Pontederia cordata*), and pennywort (*Hydrocotyle umbellata*).

#### FLUCCS 617 – Mixed Wetland Hardwoods

This forested freshwater wetland association is dominated by a mixed canopy of several tree species. Canopy species present within this wetland area include laurel oak (*Quercus laurifolia*), cabbage palm (*Sabal palmetto*), Carolina willow (*Salix caroliniana*), red maple (*Acer rubrum*), live oak (*Quercus virginiana*), and pop ash (*Fraxinus caroliniana*). Additional vegetative species present include cattail, duckweed, flatsedges (*Cyperus spp.*), ragweed, dayflower (*Commelina diffusa*), pennywort, hempvine (*Mikania scandens*), Virginia chain fern (*Woodwardia virginica*), and royal fern (*Osmunda regalis*).

#### FLUCCS 618 – Willow

These freshwater wetland areas are delineated by substantial man-made rim ditches which are primarily comprised of open water and the following vegetative species: cattail, primrose willow, duckweed, torpedo grass, creeping seedbox, spatterdock, duck potato, pickerelweed, and pennywort. The interior shrub-scrub portions of these wetlands are dominated by dense coverage of Carolina willow. Additional vegetative species present include saltbush, wax myrtle, cabbage palm, primrose willow, elderberry (*Sambucus nigra*), Virginia chain fern, royal fern, sawgrass (*Cladium jamaicense*), smartweed (*Polygonum punctatum*), dayflower, torpedo grass, ragweed, peppervine (*Ampelopsis arborea*), and hempvine.

### LISTED SPECIES SURVEY METHODOLOGY

To provide approximately 80 percent coverage of the site, both linear and nonlinear overlapping transects were completed across the parcel per FWC guidelines. Transects were spaced approximately 20-60 feet apart depending on the visibility within the vegetative association being surveyed. Evidence of protected species was gathered through both direct observation and through observation of signs such as tracks, nests, and fecal material. If evidence of utilization by a protected species which may require permitting prior to development of the subject property was observed, an aerial photograph was marked depicting the approximate location. In addition, a search of available online resources was conducted to reveal the previously documented presence of listed species which may be utilizing the subject property. These resources included, but were not limited to, the following: FWC Eagle Nest Locator Database; Charlotte County Natural Resources Department Scrub Jay Territory Search Database; FWS Panther Consultation Area Map(s); and FWS Wood Stork Colony Map(s).

### LISTED SPECIES ASSESSMENT RESULTS

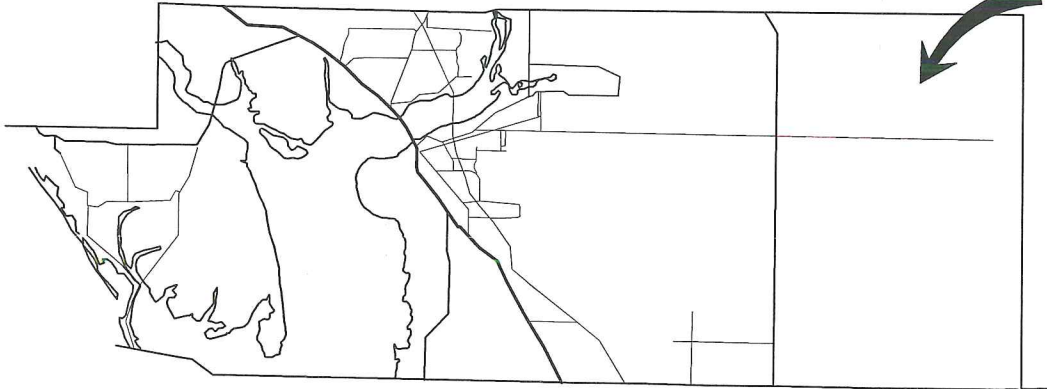
The subject property is located along the outermost reach of an 18.6-mile radius designated as Core Foraging Area of two (2) separate wood stork (*Mycteria americana*) nesting colonies. Each of the documented colonies appears to be greater than 15 miles from the subject property. Under current regulations, the proximity of the off-site nesting colonies is not likely to affect the future development of the subject property.

Search of available online resources did not reveal documentation of any other listed wildlife species currently utilizing the subject property. No protected species or evidence of protected species utilization which would require permits from the FWC or FWS were observed onsite during the March 2012 site inspection(s).



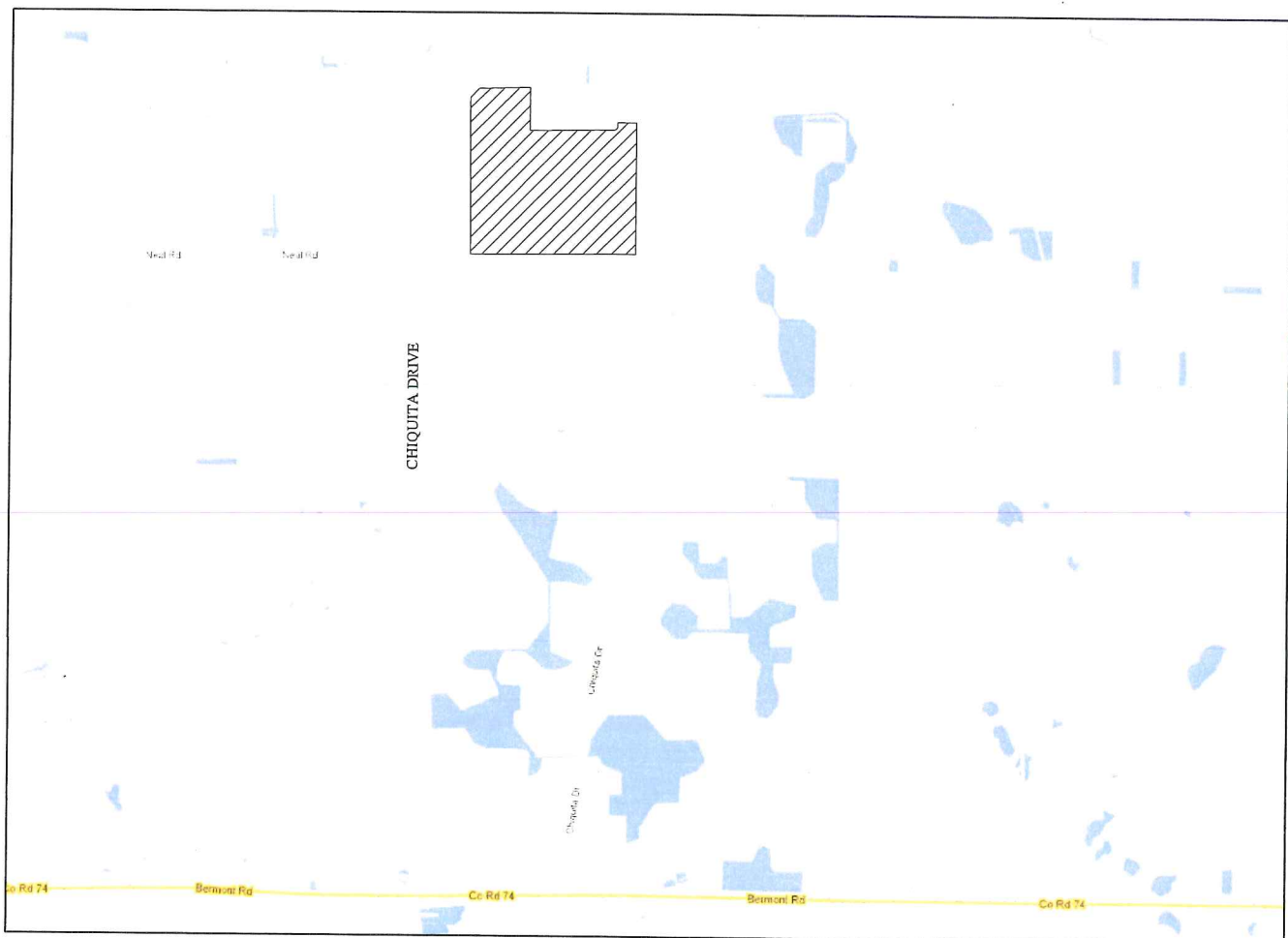
NOT TO SCALE

## SECTION 18, TOWNSHIP 40S, RANGE 27E



**SITE**

CHARLOTTE COUNTY, FLORIDA



LOCATION MAP

CALUSA GREEN / APRIL 2, 2012

**CALUSA GREEN**  
LOCATION MAP

**I V A**  
**Ian Vincent & Associates**  
Environmental Consulting Services



# SECTION 18, TOWNSHIP 40S, RANGE 27E



## LEGEND

FLUCCS	DESCRIPTIONS	ACREAGE
261	FALLOW CROP LAND	514.34±
510D	DITCH — — — —	25.61±
617	MIXED WETLAND HARDWOODS	3.36±
618	WILLOW	10.59±
TOTAL		553.90±

WETLANDS 13.95± AC.

- NOTES:
1. FOR PERMIT USE ONLY, NOT FOR CONSTRUCTION.
  2. PROPERTY BOUNDARY IS APPROXIMATE AND OBTAINED FROM SOUTHWEST ENGINEERING, INC.
  3. MAPPING APPROXIMATE AND BASED ON INTERPRETATION OF 2011 AERIAL PHOTOGRAPHY AT 1"=1000' SCALE.
  4. DELINEATION OF JURISDICTIONAL WETLANDS IS PRELIMINARY AND SUBJECT TO FIELD REVIEW/APPROVAL BY APPLICABLE REGULATORY AGENCIES.

CALUSA GREEN / MAY 8, 2012

CALUSA GREEN  
FLUCCS MAP

**Ian Vincent & Associates**  
Environmental Consulting Services



# SECTION 18, TOWNSHIP 40S, RANGE 27E



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PROTECTED SPECIES ASSESSMENT  
INSPECTION TRANSECT (APPROXIMATE)

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CALUSA GREEN / AUGUST 1, 2012

## CALUSA GREEN PROTECTED SPECIES ASSESSMENT MAP

**Ian Vincent & Associates**  
Environmental Consulting Services

# **MITIGATION AND MONITORING PLAN**

**CALUSA GREEN**  
**Charlotte County, Florida**

**April 2012**

**Prepared by:**



4050 Rock Creek Drive, Port Charlotte, FL 33948  
(941) 457-6272  
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## **INTRODUCTION**

This Mitigation and Monitoring Plan is provided to address the loss of ecological function associated with impacts to jurisdictional waters for the Calusa Green development. The subject property is located in Section 18, Township 40S, Range 27E within Charlotte County, Florida.

## **PROPOSED MITIGATION**

To offset the loss of function associated with permitted jurisdictional impacts, the Permittee shall provide on-site mitigation. On-site mitigation shall be provided through a combination of wetland enhancement and wetland creation. Wetland enhancement shall be accomplished through the preservation, where feasible, of existing on-site wetland habitat and enhancement through the removal of exotic vegetation. Wetland creation shall be accomplished through the excavation of uplands to appropriate elevations relative to the on-site hydrologic conditions and subsequent installation of desirable native hydrophytic vegetation. The excavation and planting activities, in conjunction with exotic vegetative maintenance, shall result in viable wetland habitat. The provision of the on-site mitigation shall result in no net loss of wetland function associated with the permitted jurisdictional impacts.

### **WETLAND ENHANCEMENT**

On-site wetland enhancement shall be completed through the removal of exotic/nuisance vegetative species. These areas shall be maintained in perpetuity to ensure that these areas remain free of exotic/nuisance vegetative species (Brazilian pepper, melaleuca, Australian pine, climbing fern, primrose willow, wild taro, etc.). Regular maintenance events shall be scheduled to ensure that exotic/nuisance vegetative coverage within the on-site preserved/enhanced wetland areas remain within the thresholds proposed in the Mitigation Area Success Criteria described below.

### **WETLAND CREATION**

On-site wetland creation shall be completed through the grading of existing uplands to appropriate elevations relative to existing on-site hydrologic conditions. The creation areas shall then be extensively planted with desirable wetland vegetation. Regular maintenance events will be scheduled to ensure that exotic/nuisance vegetative coverage within the created on-site wetland areas remain within the thresholds proposed in the Mitigation Area Success Criteria described below.

## **BARRICADING**

The interface between the development limits and the limits of on-site mitigation areas shall be staked in the field and clearly identified with silt fencing. Except for operation and transport of equipment/materials necessary for construction of created wetland areas, the operation and storage of construction equipment, as well as the stockpiling of fill and construction material will be prohibited within the silt fenced areas. The fencing identifying and protecting the limits of the on-site mitigation areas will be maintained for the duration of site development construction activities.



## **MITIGATION AREA SUCCESS CRITERIA**

The on-site mitigation shall be deemed successful when the following conditions have been met after a minimum of three (3) years of data collection:

1. Where appropriate, greater than 80% coverage by desirable native vegetation;
2. Less than 5% coverage by exotic vegetation;
3. The mitigation areas can be determined to be a wetland or other surface water according to Chapter 62-340, F.A.C.

*If any portion of the on-site mitigation areas have not achieved 50% coverage by desirable native vegetation by the Second Annual Monitoring Event, additional supplemental plantings may be provided within the mitigation areas.*

## **MONITORING METHODOLOGY**

Annual monitoring events will be conducted for the on-site mitigation areas and the results included in annual monitoring reports. Pedestrian monitoring transects shall be established and walked by a qualified ecologist to quantitatively and qualitatively assess the on-site mitigation areas. The data collected during monitoring events will be presented in tabular form in annual monitoring reports.

### **VEGETATION**

Vegetative monitoring shall consist of a quantitative overview of the on-site mitigation areas with approximate percent coverage by desirable and exotic/nuisance species to be noted. Vegetative data will be sampled by walking pre-determined transects and noting approximate average coverage of vegetative species within each individual mitigation area, and shall be presented in tabular form for each mitigation area. In addition, any observed areas displaying significant densities of exotic/nuisance vegetation shall be noted, depicted on an aerial photograph, and submitted with the annual monitoring reports.

### **WATER LEVELS**

Water levels within the monitored mitigation areas shall be noted during annual monitoring events and submitted with annual monitoring reports.

### **PHOTO STATIONS**

Permanent photographic stations shall be established to document the relative condition of the mitigation areas at the time of the subject monitoring event. Photographic documentation shall be included in the annual monitoring reports.

### **WILDLIFE UTILIZATION**

Any evidence of wildlife utilization (direct observation, tracks, scat, etc.) within the on-site mitigation areas shall be noted during monitoring events and included in annual monitoring reports.

## **ANNUAL REPORTS**

The Monitoring Program shall include a Time Zero Monitoring Report conducted 30 to 45 days subsequent to completing the initial exotic removal, grading, and planting activities within the on-site mitigation areas. A survey of the aerial extent and cross sectional evaluation of the mitigation areas, panoramic photos, and dates of completion shall be included. Subsequent monitoring reports shall be completed annually near the end of the summer growing season for a minimum of three (3) years. Reports shall include data collected during the monitoring events, a statement of maintenance efforts within the mitigation areas, and conclusions/recommendations regarding any changes to improve the mitigation site.

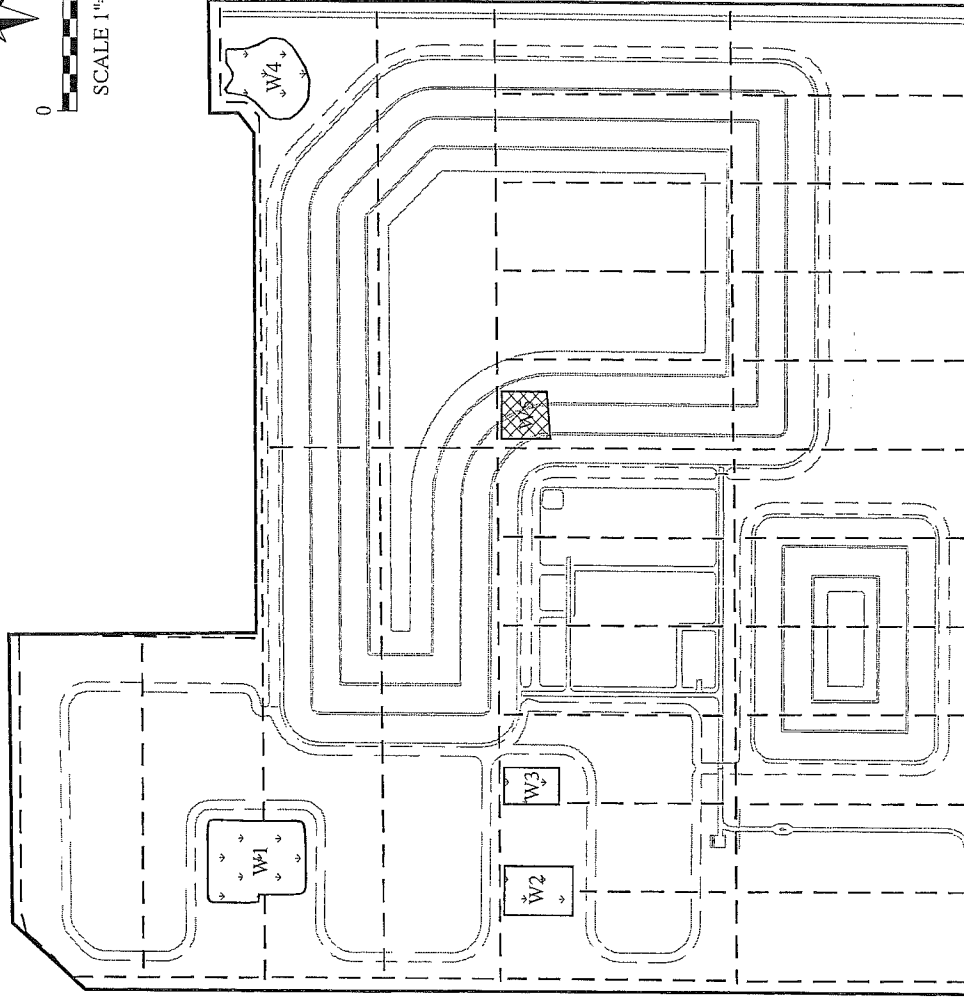
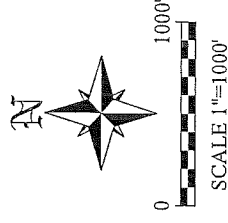
## **ON-SITE MITIGATION SCHEDULE**

<b>ACTIVITY</b>	<b>ESTIMATED COMPLETION DATE</b>
Completion of Grading, Planting, & Initial Exotic Removal	November, 2013
Time-Zero Monitoring Event	December, 2013
First Annual Monitoring Event	August, 2014
Second Annual Monitoring Event	August, 2015
Third Annual Monitoring Event	August, 2016

*All dates based on obtaining all required local, state, and federal permits by August, 2013.*



# SECTION 18, TOWNSHIP 40S, RANGE 27E



## LEGEND

	WETLAND PRESERVE	12.39 Ac±
	WETLAND IMPACT	1.56 Ac±
	AGRICULTURAL DITCH	25.61 Ac±

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CALUSA GREEN / MAY 8, 2012

## CALUSA GREEN WETLAND IMPACT / PRESERVE MAP

**Ian Vincent & Associates**  
 Environmental Consulting Services

# SECTION 18, TOWNSHIP 40S, RANGE 27E



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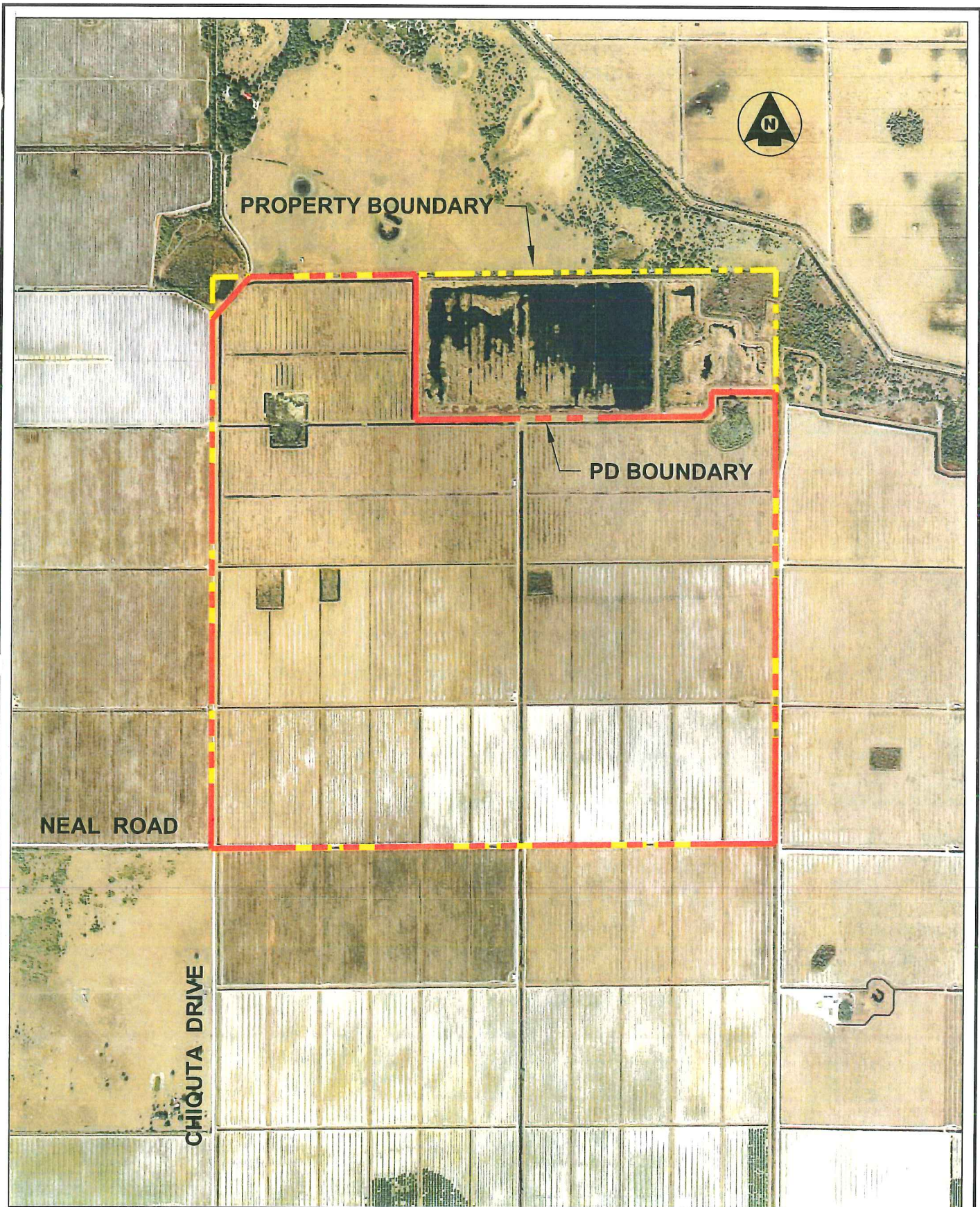
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CALUSA GREEN / MAY 8, 2012

CALUSA GREEN  
FLUCCS MAP

**Ian Vincent & Associates**  
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 www.sedfl.com  
 Certificate of Authorization No. 26551

Project No.: 10-0109  
 Proj. Manager: K H R  
 Proj. Designer: G W B  
 Drawn By: R G  
 Checked By: E P L  
 Approved By: G W B

CALUSA GREEN

**AERIAL MAP  
 EXHIBIT 2-A-3**

SECTION 18 TOWNSHIP 40S RANGE 27E

DATE: 05-01-12  
 SCALE: 1" = 2400'  
 SHEET 1 of 1  
 PROJECT No.: 10-0109